

## CLAIMS

1. A recording and reproducing apparatus,  
comprising:

at least one of a recording portion for  
5 recording encrypted data to a recording medium having  
first information that is unique thereto and a  
reproducing portion for reproducing encrypted data  
recorded on the recording medium;

a storing portion for storing second  
10 information uniquely assigned to a valid electronic  
apparatus or valid application software; and

a connecting portion for mutually  
authenticating a data processing apparatus for at least  
encrypting data or decrypting encrypted data with a key  
15 generated in accordance with both the first information  
unique to the recording medium and the second  
information stored in the storing portion.

2. The recording and reproducing apparatus as  
set forth in claim 1,

20 wherein a part of the second information is  
stored in the storing portion,

wherein the other part of the second  
information is stored in the data processing apparatus,  
and

25 wherein the part of the second information  
stored in the storing portion and the other part of the  
second information stored in the data processing

apparatus are combined as the second information.

3. The recording and reproducing apparatus as set forth in claim 1,

wherein the data processing apparatus has a  
5 revoke processing portion for performing revocation  
with at least the second information stored in the  
storing portion and the first information unique to the  
recording medium when the second information stored in  
the storing portion is not information unique to a  
10 valid electronic apparatus or valid application  
software, and

wherein the connecting portion is configured  
to send the second information stored in the storing  
portion to the data processing apparatus.

15 4. The recording and reproducing apparatus as  
set forth in claim 3,

wherein the second information that is sent  
is encrypted.

5. The recording and reproducing apparatus as  
20 set forth in claim 1, further comprising:

a revoke processing portion for performing  
revocation with the second information stored in the  
storing portion and the first information unique to the  
recording medium when the second information stored in  
the storing portion is not information unique to a  
25 valid electronic apparatus or valid application  
software.

6. A recording and reproducing apparatus,  
comprising:

at least one of a recording portion for  
recording encrypted data to a recording medium having  
5 first information that is unique thereto and a  
reproducing portion for reproducing encrypted data  
recorded on the recording medium;

a storing portion for storing second  
information uniquely assigned to a valid electronic  
10 apparatus or valid application software;

a connecting portion for mutually  
authenticating a data processing apparatus for at least  
encrypting data or decrypting encrypted data with a key  
generated in accordance with both the first information  
15 unique to the recording medium and the second  
information stored in the storing portion; and

a revoke processing portion for performing  
revocation with the second information sent from the  
data processing apparatus through at least the  
20 connecting portion and stored in the storing portion  
and the first information unique to the recording  
medium when the second information stored in the  
storing portion is not information unique to a valid  
electronic apparatus or valid application software.

25 7. The recording and reproducing apparatus as  
set forth in claim 6, further comprising:

decrypting means for decrypting the encrypted

second information.

8. A data processing apparatus, comprising:

a connecting portion for mutually authenticating a recording and reproducing apparatus for at least recording encrypted data to a recording medium having second information uniquely assigned to only a valid electronic apparatus or valid application software and first information unique thereto or reproducing encrypted data therefrom; and

a processing portion for at least encrypting data or decrypting encrypted data with a key generated in accordance with both the first information unique to the recording medium and sent from the recording and reproducing apparatus through the connecting portion and the second information unique to the electronic apparatus or application software.

9. data processing apparatus as set forth in claim 8,

wherein a part of the second information is stored in the storing portion,

wherein the other part of the second information is stored in the recording and reproducing apparatus, and

wherein the part of the second information stored in the storing portion and the other part of the second information stored in the data processing apparatus are combined as the second information.

10.           The data processing apparatus as set forth in claim 8,

              wherein the data processing apparatus has a  
5       revoke processing portion for performing revocation  
with both the second information sent from the  
recording and reproducing apparatus through the  
connecting portion and the first information unique to  
the recording medium when the second information is not  
10       information unique to a valid electronic apparatus or  
valid application software.

11.           The data processing apparatus as set forth in claim 10, further comprising:

              decrypting means for decrypting the encrypted  
15       second information.

12.           The data processing apparatus as set forth in claim 8,

              wherein the data processing apparatus is  
connected to the recording and reproducing apparatus  
20       that has a revoke processing portion for performing  
revocation with both the second information stored in  
at least the recording and reproducing apparatus and  
the first information unique to the recording medium  
when the stored second information is not information  
25       unique to a valid electronic apparatus or valid  
application software.

13.           A data processing apparatus, comprising:

a storing portion for storing second information uniquely assigned to only a valid electronic apparatus or valid application software;

a connecting portion for mutually authenticating a recording and reproducing apparatus for at least recording encrypted data to a recording medium having first information unique thereto and reproducing encrypted data recorded on the recording medium; and

a processing portion for at least encrypting data or decrypting encrypted data with a key generated in accordance with both the first information unique to the recording medium and the second information stored in the storing portion,

wherein the second information stored in the storing portion is sent to the recording and reproducing apparatus that has a revoke processing portion for performing revocation when the second information stored in the storing portion is not information unique to a valid electronic apparatus or valid application software.

14. The data processing apparatus as set forth in claim 13,

wherein the second information that is sent is encrypted.

15. A recording, reproducing, and processing system, comprising:

a recording and reproducing apparatus for at least recording encrypted data to a recording medium having first information that is unique thereto or reproducing encrypted data recorded on the recording medium, the recording and reproducing apparatus having second information uniquely assigned to a valid electronic apparatus or valid application software; and

a data processing apparatus for at least encrypting data or decrypting encrypted data with a key generated in accordance with both the second information at least stored in the recording and reproducing apparatus and the first information unique to the recording medium.

16. The recording, reproducing, and processing system as set forth in claim 15,

wherein the data processing apparatus has a revoke processing portion for performing revocation with the first information unique to the recording medium and the second information stored in the data processing apparatus when the second information stored therein is not information that is unique to a valid electronic apparatus or valid application software.

17. The recording, reproducing, and processing system as set forth in claim 15,

wherein the recording and reproducing apparatus has a revoke processing portion for performing revocation with the first information unique

to the recording medium and the second information stored in the data processing apparatus when the stored second information is not information that is unique to a valid electronic apparatus or valid application software.

18. A recording, reproducing, and processing system, comprising:

a recording and reproducing apparatus for storing second information uniquely assigned to only a valid electronic apparatus or valid application software and at least recording encrypted data to a recording medium having first information unique thereto or reproducing encrypted data recorded on the recording medium; and

a data processing apparatus for encrypting data or decrypting encrypted data with a key generated in accordance with both the second information stored in the recording and reproducing apparatus and the first information unique to the recording medium,

wherein the data processing apparatus is configured to send the second information stored in the storing portion thereof to the recording and reproducing apparatus having a revoke processing portion for performing revocation when the second information stored in the recording and reproducing apparatus is not information unique to a valid electronic apparatus or valid application software.



19.       A recording and reproducing apparatus,  
comprising:

          at least one of a recording portion for  
recording encrypted data to a recording medium on which  
5       first information for revoking an invalid electronic  
apparatus, second information that is unique to each  
content, third information that can be defined for each  
encrypting unit, and identification data that is unique  
to each stamper are recorded and a reproducing portion  
10       for reproducing encrypted data from the recording  
medium;

          a storing portion for storing fourth  
information uniquely assigned to a valid electronic  
apparatus or valid application software,

15       a revoke processing portion for determining  
whether or not the stored fourth information is  
information unique to a valid electronic apparatus or  
valid application software in accordance with the first  
information and the fourth information; and

20       a calculating portion for obtaining  
intermediate key information unique to each recording  
medium in accordance with the first information, the  
fourth information, the second information, and the  
identification data when the revoke processing portion  
25       has determined that the fourth information is  
information unique to a valid electronic apparatus or  
valid application software.

20. The recording and reproducing apparatus as set forth in claim 19, further comprising:

an authenticating portion for mutually authenticating a data processing apparatus for at least encrypting data or decrypting encrypted data with a key generated in accordance with the intermediate key information; and

an intermediate key information encrypting portion for encrypting the intermediate key information with a bus key generated when the authentication has been successful and sending the encrypted intermediate key information to the data processing apparatus.

21. A data processing apparatus, comprising:

an authenticating portion for authenticating a recording and reproducing apparatus for at least recording and reproducing encrypted data to and from a recording medium on which fourth information uniquely assigned to a valid electronic apparatus or valid application software, first information for revoking an invalid electronic apparatus, second information unique to each content, third information that can be defined for each encrypting unit, and identification data unique to each stamper are recorded;

a key information decrypting portion for receiving from the recording and reproducing apparatus intermediate key information unique to each recording medium, the intermediate key information being

generated in accordance with the first information, the fourth information, the second information, and the identification data having encrypted with a bus key generated when the authentication has been successful;

5            an encryption key generating portion for generating an encryption key with the third information received from the recording and reproducing apparatus and the decrypted intermediate key information; and

10           an encrypting and decrypting portion for at least performing encryption with the encryption key or performing decryption with the encryption key.